



INSTRUCTIONS

TRUCKS

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INTRODUCTION

This section covers the truck assembly. The truck assembly, two per locomotive, is located under the locomotive body. Also, it performs as a conveyance to transport the locomotive.

The truck assembly consists basically of the following:

1. A steel frame to provide a mounting platform.
2. A truck bolster to support the locomotive body.
3. Two (or three) wheel-and-axle assemblies to provide means of transportation.

These instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation, operation or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes, the matter should be referred to the General Electric Company.

Verify numbers for parts, tools, or material by using the Renewal Parts or Tool Catalogs, or contact your General Electric representative for assistance. Do not order from this publication.

BRAKE RIGGING FLOATING BOLSTER TWO-AXLE TRUCKS

INSPECTION

Daily or trip, inspect for wear and also for loose, broken or missing parts. Renew brake shoes when they are worn. Check the brake-cylinder piston travel, Fig. VI-1.

LUBRICATION

Do not lubricate the pins, bushings or wear plates. It has been found that grit and dirt sticking to the exposed oil surfaces causes more wear than when the parts are dry.

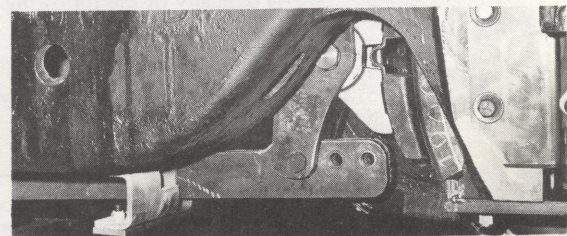
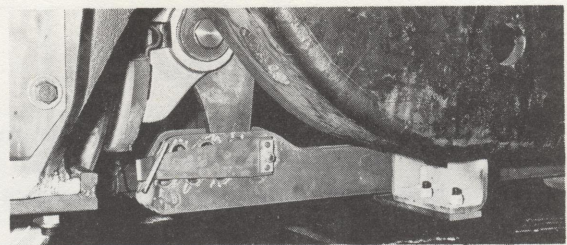
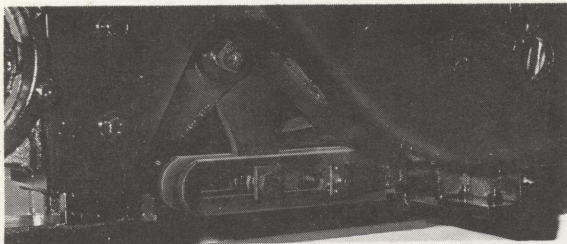
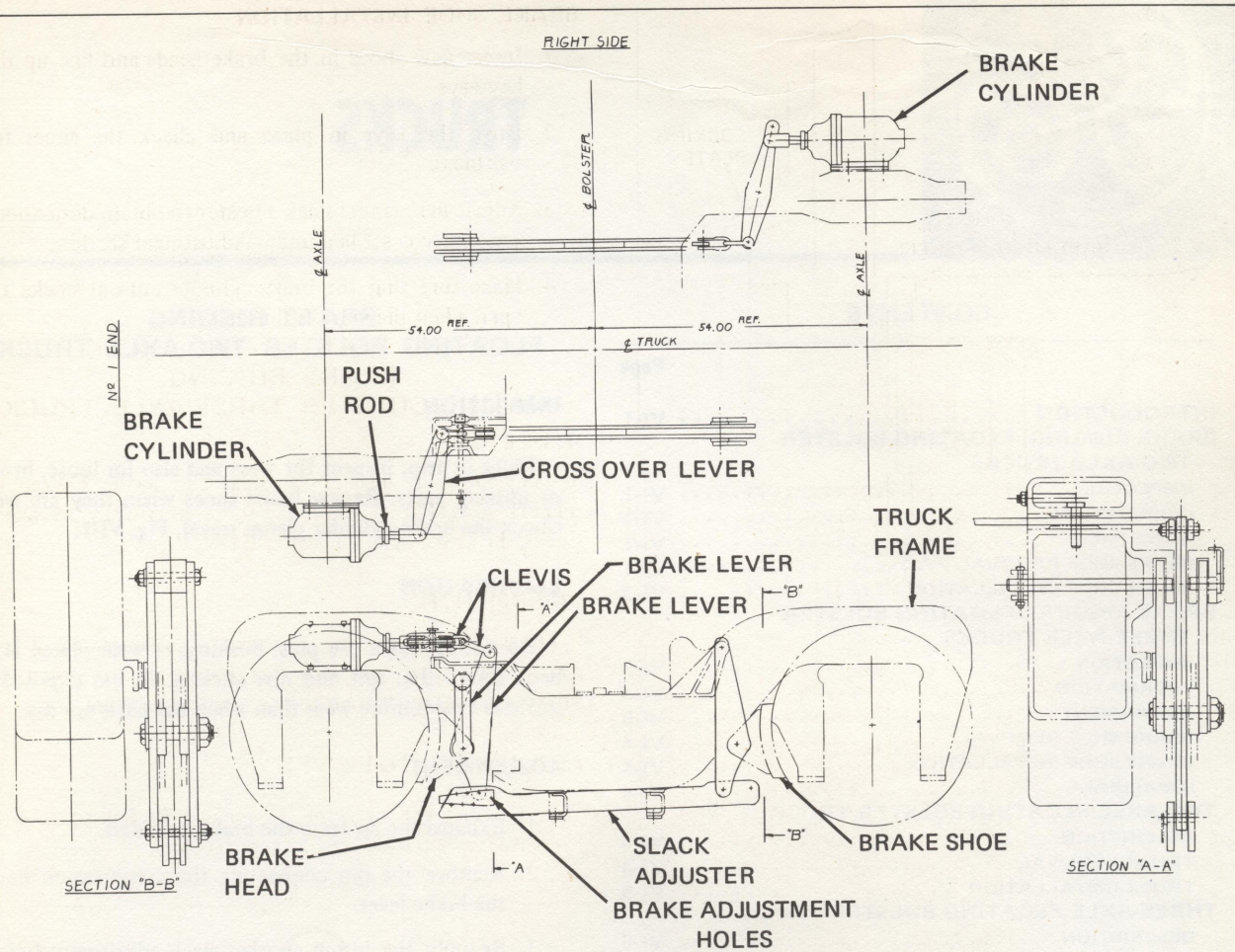
ADJUSTMENT

1. Exhaust the air from the brake cylinders.
2. Remove the pin connecting the compression bar to the brake lever.
3. Reapply the pin in another slack adjustment hole to obtain 2-1/2 in. brake-cylinder push rod travel.
4. The maximum brake-cylinder push rod travel allowed is 6 in.

BRAKE SHOE REMOVAL

1. Exhaust the air from the brake cylinder.
2. Move the shoes as far as possible from the wheel tread by adjusting the manual slack adjuster and/or picking-up the coarse adjustment.
3. Hammer the keys out of the brake-shoe head.
4. Knock the shoes loose from the brake head, and remove them by sliding them up the wheel and out.

VI



PREVIOUS SLACK ADJUSTER HOLE ARRANGEMENT.

CURRENT SLACK ADJUSTER HOLE ARRANGEMENT.

FIG. VI-1. BRAKE-RIGGING ARRANGEMENT.

FIG. VI-2, E-13506B

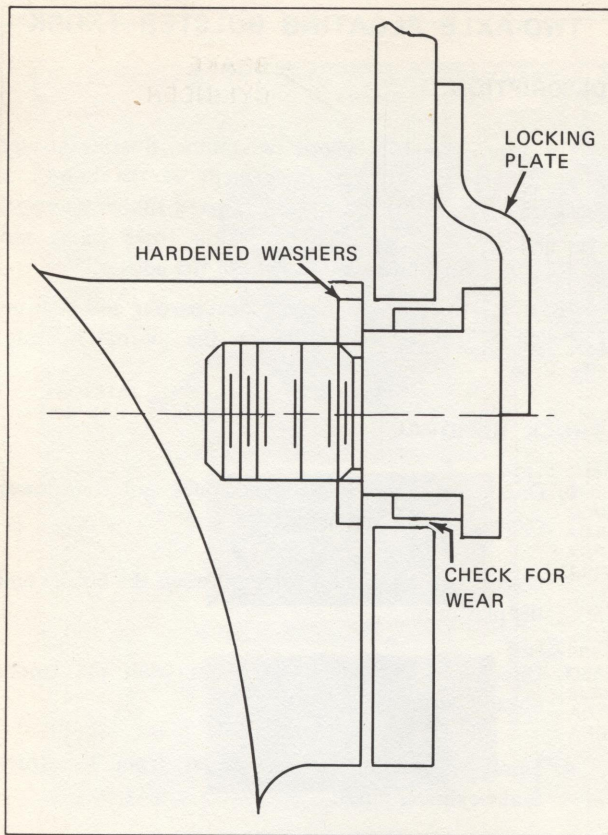


FIG. VI-2. BRAKE-CYLINDER SUPPORT.

BRAKE SHOE INSTALLATION

1. Insert new shoes in the brake heads and line up the keyways.
2. Drive the keys in place and check the shoes for tightness.
3. Adjust the manual slack adjuster to obtain dimensions previously described under Adjustment section.
4. Make sure that the brake-cylinder cut-out cocks are open when the work is finished.

BRAKE RIGGING
FLOATING BOLSTER THREE-AXLE TRUCKS
INSPECTION

Daily or trip, inspect for wear and loose, broken or missing parts. Renew the brake shoes when they are worn. Check the brake-cylinder piston travel, Fig. VI-2.

LUBRICATION

Do not lubricate pins, bushings or wear plates. It has been found that grit and dirt sticking to exposed oil surfaces causes more wear than when the parts are dry.

ADJUSTMENT (See Fig. VI-3)

1. Exhaust the air from the brake cylinders by turning the truck cut-out cock under the deck.

FIG. VI-3, E-13505B

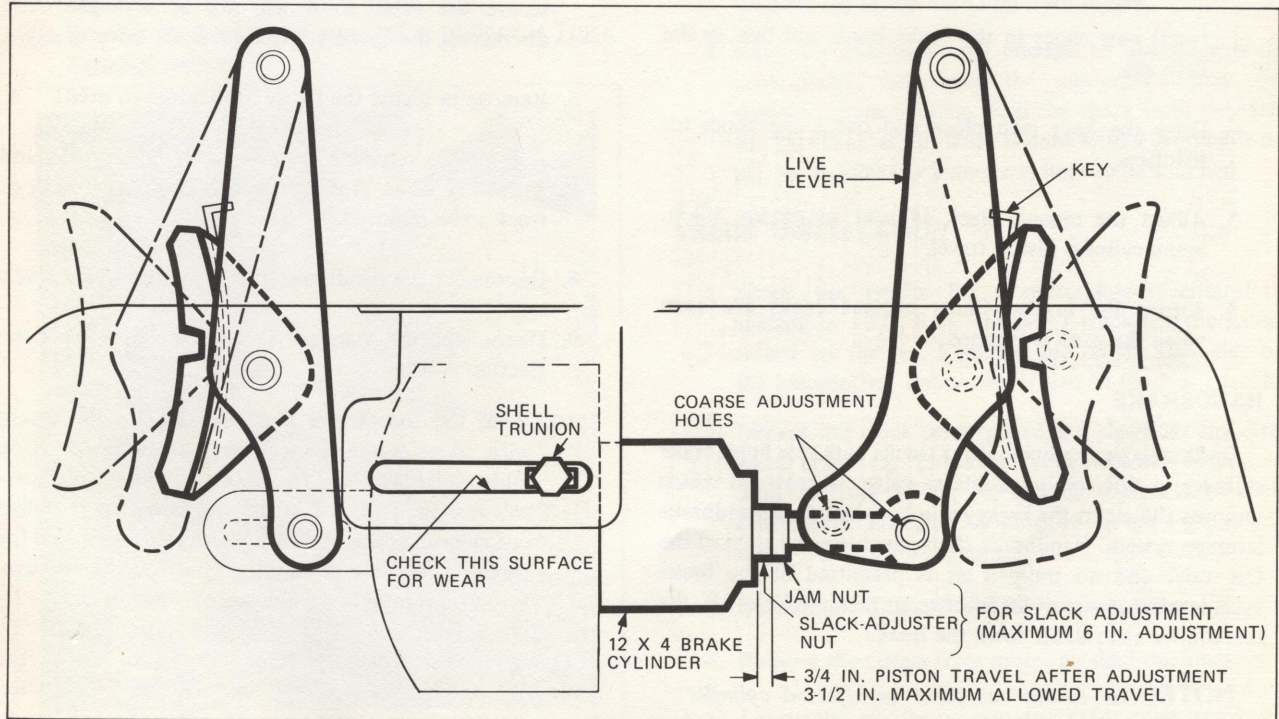


FIG. VI-3. BRAKE-RIGGING ARRANGEMENT.

2. Loosen the jam nut on the piston push rod, and turn the adjusting nut. To reduce piston travel, turn the nut to move the shoes closer to the wheels; to increase piston travel, move the shoes away from the wheels. After adjustment, tighten the jam nut.
3. Piston travel should be held as close as possible to a low limit of 3/4 in. Travel should not exceed 3-1/2 in. maximum.
4. When piston travel cannot be adjusted with slack-adjuster movement alone, a coarse adjustment becomes necessary. To make a coarse adjustment, reconnect the lower end of the live lever to another set of coarse adjustment holes in the live lever, and reconnect to the cylinder push rod.

BRAKE SHOE REMOVAL

1. Exhaust the air from the brake cylinder.
2. Move the shoes as far as possible from the wheel tread by adjusting the manual slack adjuster and/or picking-up the coarse adjustment.
3. Hammer the keys out of the brake-shoe head.
4. Knock the shoes loose from the brake head, and remove them by sliding them up the wheel and out.

BRAKE SHOE INSTALLATION

1. Insert new shoes in the brake heads and line up the keyways.
2. Drive the keys into place and check the shoes for tightness.
3. Adjust the manual slack adjuster to obtain 3/4 in. brake-cylinder piston travel.
4. Assure the brake-cylinder cut-out cocks are open when the work is finished.

HANDBRAKE

On three-axle floating-bolster trucks with low hung brake cylinder, a QR, or quick-release valve, is provided which removes the air in the brake cylinder which is in handbrake leverage system. Handbrake chain must trip the stem of the QR valve and no trapped air is permitted in the brake cylinder. Otherwise, if locomotive air pressure leaks off, the locomotive can roll on down the track.

NOTE: *Air is not reapplied to affected cylinder with release of handbrake, only with reapplication of air brakes, and stem is not tripped.*

TWO-AXLE FLOATING BOLSTER TRUCK

DESCRIPTION

The truck is a four-wheel, two-motor, floating bolster type. Lateral or sideways movement of the bolster is provided by having it rest on four, curved rubber and steel sandwich mounts. Wear plates on the truck frame and bolster limit longitudinal movement of the bolster.

The truck frame is a one-piece steel casting and rests on coil springs which are seated on the journal housing, Fig. VI-4.

TRUCK REMOVAL

1. Disconnect the ground lead cables and four power cables at each traction motor.
2. Disconnect the ground cable between the bolster and the platform.
3. Disconnect all the sander hoses from the sander nozzles on the truck.
4. Disconnect the air brake hoses from the truck brake-cylinder pipes.
5. Disconnect the axle alternator cables from the junction box on the journal housing adapter. Coil and secure the cable so it will not be damaged. Also disconnect the speed control governor drive or cable.
6. Remove or secure the flange lubricators (if used).
7. Remove the retaining bolts for safety hook pins, and the safety hook pins (two per truck) from trucks or truck to be removed.
8. Disconnect the handbrake chain from the brake lever.
9. Disconnect the traction motor air boot from the traction motors.
10. Raise the locomotive platform clear of the trucks with jacks or crane, or lower the trucks on drop table watching that the cables, air ducts and hoses will not be damaged. If the trucks are to be pulled out sideways, the platform will have to be raised (or trucks lowered) at least 10 in. on locomotive. Fig. VI-5 shows lifting hook and loading pad.
11. After the truck is removed from under the locomotive, cover the air duct openings on all the traction motors and cover the truck centerplate to prevent entrance of dirt and other foreign matter.

FIG. VI-4, E-19120

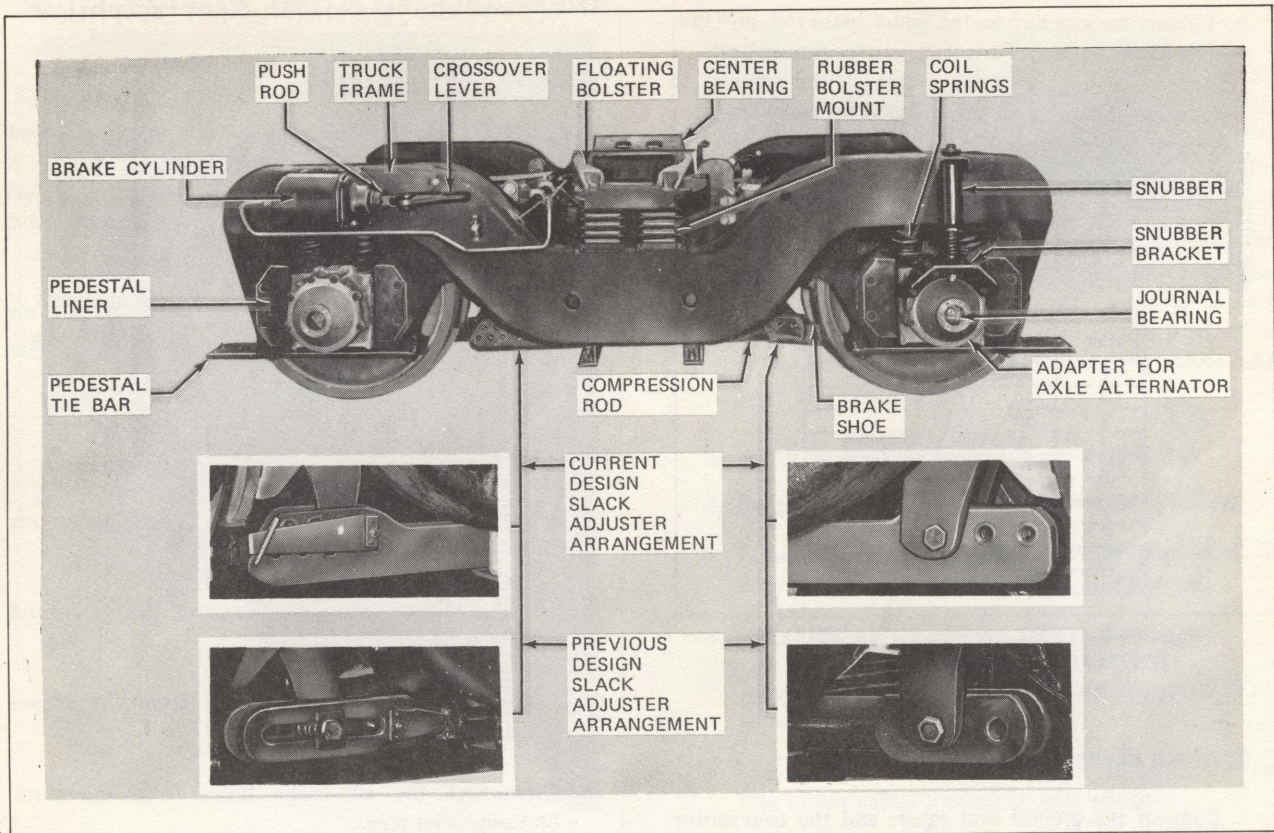


FIG. VI-4. TRUCK ASSEMBLY.

Removal of One Truck

1. Prepare the truck to be removed as outlined in Truck Removal section.

2. Remove the safety hooks on both trucks.
3. Raise the platform high enough to disengage both centerplates; otherwise the centerplate may be damaged from cocking. Roll the truck from beneath the platform. If this work is done with a drop table in pit, the second truck does not have to be touched.

TRUCK INSTALLATION

1. Space the trucks for a centerplate-to-centerplate spacing of 30 ft. 8 in. The No. 1 truck has the speed record on the No. 1 journal and on the right-side of the locomotive. Handbrake is also on the No. 1 truck.
2. Inspect the truck centerplates and clean out any dirt, metal chips, etc. Lubricate the centerplates by adding 3 pt. mixture of car oil and dry graphite to each centerplate. The mixture proportions are 1 gal. of car oil to 1/2 lb. of dry graphite.
3. Install the dust guard and the retaining clamp.
4. Remove the covers from motor air duct openings.
5. Lower the platform onto truck (or raise truck on drop table), carefully engaging the centerplates.

FIG. VI-5, E-19121

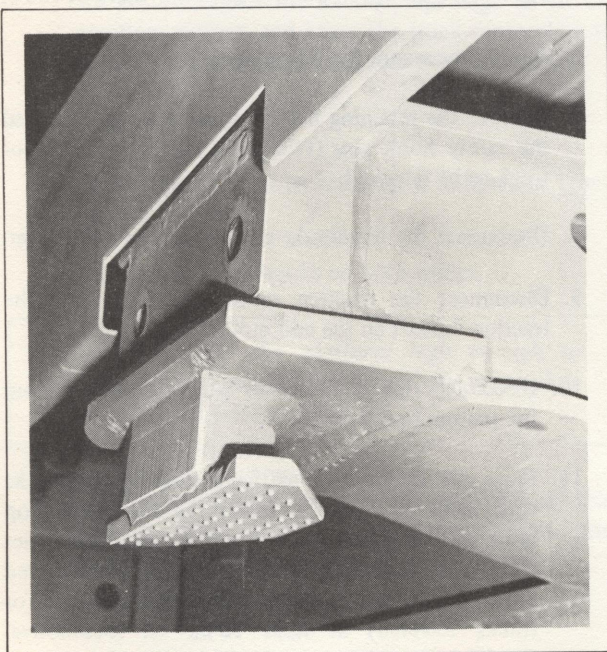
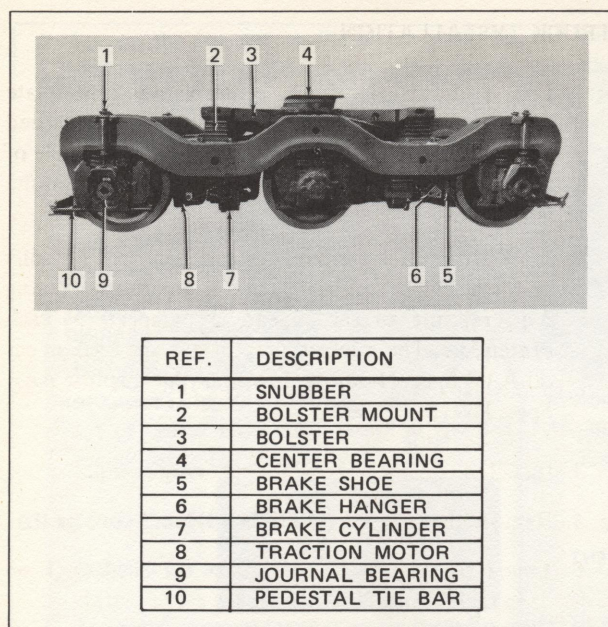


FIG. VI-5. LIFTING HOOK AND LOADING PAD.



**FIG. VI-6. TYPICAL TRUCK ASSEMBLY
(WITH 12 X 4 BRAKE CYLINDER).**

6. Attach all safety hook pins and pin retainers.
7. Connect the ground lead cables and the four motor cables to each traction motor.
8. Connect the ground cable between the bolster and the platform.
9. Connect the air brake hoses from the platform to the brake cylinder pipes on truck. Be sure to open the cut-out cocks in these pipes under the platform before placing the locomotive in service.
10. Install the hoses from the sand pipes on the platform to the sander nozzles on the trucks.
11. Connect the handbrake chain to the brake lever.
12. Connect the axle alternator cables to the journal housing junction box. Also connect the speed control governor cable.
13. Be certain that the journal bearings, traction motor gear cases and traction motor suspension bearings are lubricated before moving locomotive.
14. Adjust the brake rigging.
15. Check the traction motor rotation.

THREE-AXLE FLOATING BOLSTER TRUCK

DESCRIPTION

The truck is a six-wheel, three-motor floating bolster type. Lateral or sideways movement of the bolster is provided by having it rest on four curved rubber and steel sandwich mounts. Wear plates on the truck frame and bolster limit longitudinal movement of the bolster.

The truck frame is a one-piece steel casting and rests on coil springs which are seated on the journal housing, Fig. VI-6.

TRUCK REMOVAL

1. Disconnect the ground lead cables and all four power cables at each traction motor.
2. Disconnect the ground cable between the bolster and the platform.
3. Disconnect all the sander hoses from the sander nozzles on the truck.
4. Disconnect the air brake hoses from the truck brake-cylinder pipes.
5. Disconnect the axle alternator cables from the junction box on the journal housing adapter. Coil and secure the cable so it will not be damaged. Also disconnect the speed control governor drive or cable.
6. Remove or secure the flange lubricators (if used).
7. Remove the retaining bolts for safety hook pins, and the safety hook pins (two per truck) from trucks or truck to be removed.
8. Disconnect the handbrake chain from the brake lever.
9. Disconnect the traction motor air boot from the traction motors on the end motors only.
10. Disconnect the snubbers or shock absorbers from the journal box housing.
11. Raise the locomotive platform clear of the trucks with jacks or crane, or lower the trucks on drop table watching that the cables, air ducts and hoses will not be damaged. If the trucks are to be pulled out sideways, the platform will have to be raised (or trucks lowered) at least 10 in. on locomotive. Fig. VI-7 shows lifting hook and loading pad.

FIG. VI-6, E-16145

FIG. VI-7, E-5559

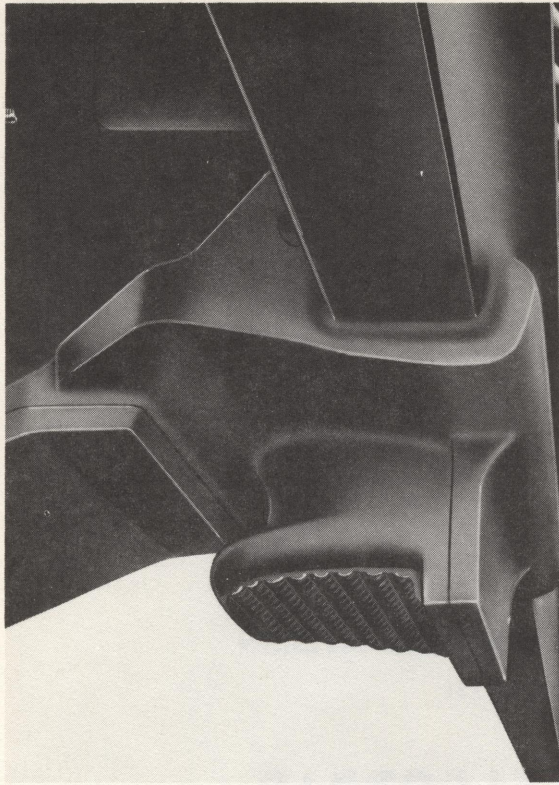


FIG. VI-7. LIFTING HOOK AND LOADING PAD.

12. After the truck is removed from under the locomotive, cover the air duct openings on all the traction motors, and cover the truck centerplate to prevent entrance of dirt and other foreign matter.

Removal of One Truck

1. Prepare the truck to be removed as outlined in Truck Removal section.
2. Remove the safety hooks on both trucks.

CAUTION: Raise the platform high enough to disengage both centerplates; otherwise the centerplate may be damaged from cocking.

3. Roll the truck from beneath the platform. If this work is done with a drop table in pit, the second truck does not have to be touched.

TRUCK INSTALLATION

1. Locate the trucks for a centerplate-to-centerplate proper spacing. The No. 1 truck usually has the speed recorder on the No. 1 journal and on the right-side of the locomotive. A handbrake is normally fitted on the No. 1 truck.
2. Inspect the truck centerplates and clean out any dirt or metal chips. Lubricate the centerplates by adding 3 qt. mixture of car oil and dry graphite to each centerplate. The mixture proportions are 1 gal. of car oil AAR Spec. M-906 to 1/2 lb. of dry graphite AAR Spec. M-913.
3. Install the dust guard and the retaining clamp.
4. Remove the covers from motor air duct openings.
5. Lower the platform onto trucks (or raise truck on drop table) carefully engaging the centerplates.
6. Attach all safety hook pins and pin retainers.
7. Attach the snubbers to the journal housings, if not already attached.
8. Connect the ground lead cables (if used) and the four motor cables to each traction motor.
9. Connect the ground cable between the bolster and the platform (if used).
10. Connect the air brake hoses from the platform to the brake cylinder pipes on truck. Be sure to open the cut-out cocks in these pipes under the platform before placing the locomotive in service.
11. Install the hoses from the sand pipes on the platform to the sander nozzles on the trucks.
12. Connect the handbrake chain to the brake lever.
13. Connect the axle alternator cables to the journal housing junction box. Also connect the speed control governor cable.
14. Assure the journal bearings, traction motor gear cases and traction motor suspension bearings are lubricated before moving locomotive.
15. Adjust the brake rigging.
16. Check the traction motor rotation.